JFK

62-109060

SERIAL 4199 EBF

PART 3

WORK COPY

Front of car does not touch line drawn from left edge of sign 172

Line from edge of sign directs Ko head 197

Ko head above left post of sign 201

Car first protrudes from right edge of sign 205

Full face of Connally 228

Copy slides to be of frames 172 through 323.

Film Test of Muchmore Camera.

1st 10 sec.	18.8	18.6	18.9
2nd 10 sec.	18.6	18.4	19.2
3rd 10 sec.	17.6	18.1	17.3
Last 5 sec	16.	16.6	16.2

1st 10 sec.	19.2	19.2	19.6
2nd 10 sec	18.7	19.2	18.8
3rd 10 sec	18.0	17.9	17.0
Last 5 sec.	~~12.6~~	16.4	15.8

Average 1st 10 sec. 19.05
" 2nd 10 sec 18.8
" 3rd 10 sec 17.6

Overall average 18.5

Mrs Marie Muchmore Film:—

Pertinent portion total 66 frames.
3rd shot on frame 42
First 12 frames not clear.—

She was standing on N.W corner
of Main + Houston

Comparison of Nix + Zapruder frame from 3rd shot on:

frame #13 Rt hand up.
.. #44 Left hand on trunk deck
.. #53 Rt hand on deck
.. #54 One foot on bumper
.. #58 Jackie's knees on deck + Hill one foot on bumper.
.. #68 Hill both feet on bumper.
.. #81 Jackie's head turns to start back into car.

Nikon Camera.

1st 10 sec	2nd 10 sec	3rd 10 sec	Last 5 or	Average
18.5	184	184	83	peak 18.433 all 18.171
185	185	186	81	peak 18533 all 18.2
188	186	184	74	peak 18.6 all 18.057
192	189	183	77	peak 18.8 all 18.314
740	744	739	315	

averages

18.5 18.6 18.425 15.75 = 17.825

average 18.5 (exclusive of run down end)

Nix Film

Frame #1 is start of portion after shots 1 and 2.

Third Shot - Frame #24

Hill's head behind lamp post center of frame # 88 - 88 frame @ 18.5 = 4.324 sec.

Complete blur - #123 = 6.649 sec

Total 267 frames

Approx 200 frames at first portion of motorcade before shots.

Total film - 467 frames @ 18.5 = 25.243 sec.

Change in frame count. seconds.

Middle of Sign to 3rd shot
Frame 212 to 313 = 102 = 5.573

K. head after sign to 3rd shot
225 to 313 = 89 - 4.863

K. head after sign to lamp post.
225 to 272 = 48 - 2.623

Lamp post to 3rd shot -
272 to 313 = 42 - 2.295

K head 1/3 from edge of sign to 3rd shot
216 to 313 = 98 = 5.355

(Above based on inclusive count)

Frame Count - Zabruder Film

From begin to "start-stop" + pres. car.	132
First frame showing president's car	133
Frame with K head center of sign	212
Frame with K head 1/3 from edge of sign	216
Full face of K after sign board	225
President's head behind lamp post	272
Third Shot	313
Sands Touch (Mark + Hill)	397 or 398
Clear lamppost in center frame	405
Last Frame	486

Total elapsed time @ 18.3 fps
26.557

Same @ 18.1 fps = 26.850

55 Shandan Tan

56 →

61

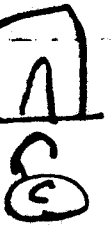
62

66

67

68 ←

73



4.917

From sign to 3rd shot 89 fr. - 4.868 sec.

Middle of sign to 3rd shot 102 fr. - 5.573 sec. 5.641

Lead edge of sign to 3rd shot 117 fr. - 6.4 sec

From sign to lamp post 48 fr. - 2.623 sec

From lamp post to 3rd shot 42 fr. - 2.295 sec

Pres. waving behind sig. to 3rd shot 107 fr. - 5.847 sec. 5.8747

1/3 from edge of sign to 3rd shot 98 fr. - 5.355

18.3 frames per second

.05465 seconds per frame

1/29/64

Take 1

2 to 4 = 183

4 to 6 = 185

6 to 8 = 179

8 to 10 = 178

10 to 12 = 174

2 to 12 = 899

Average speed Take 1 = 17.98

(12 to 2 area flagged)

Take 2

12 to 2 = 181
2 to 4 = 183
4 to 6 = 184
6 to 8 = 181
8 to 10 = 178
10 to 12 = 178
12 to 12 = 1085

Average speed 18.083

Take 3

Too limited for accuracy

Take 4

(12 to 6 area fogged)

6 to 8 = 189

8 to 10 = 185

6 to 10 = 374

Average speed 18.7

Take 5

12 to 2 = 180

2 to 4 = 185

4 to 6 = 184

6 to 8 = 181

8 to 10 = 179

10 to 12 = 176

12 to 12 = 1085

Average speed 18.083

Take 6

12 to 2 = 177
2 to 4 = 181
4 to 6 = 184
5 to 7 = 182
Total 724
Average Speed 18.1

Take 1 = 17.980
" 2 = 18.083
" 4 = 18.700
" 5 = 18.083
" 6 = 18.100
Total 90.946
Average speed 18.189
Individual average speed 18.117

Tape 1

183
185
179
178
174

897

179.8

5/8.9

Take 2

1 6 1
1 8 3
1 8 4
1 8 1
1 7 8
1 7 8

1 0 8 5

18,083
6/10850

Take 4

187

169
185
374

187
2/374

Table 5

	180
	185
	184
	181
	179
	176
	1085

18,083

6 T 10850

Tuke 6

177
181
164
182

724

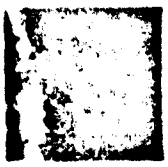
181
4 | 724

Average of averages

1	7980
2	8083
3	6700
4	6083
5	8100
	90946

18.189

5 | 90.946



	183
	165
	179
	176
	174
	181
	183
	184
	161
	176
	178
	189
	165
	160
	185
	184
	181
	179
	176
	177
	181
	184
	182
4	167

18.118

23 | 4167

23

186

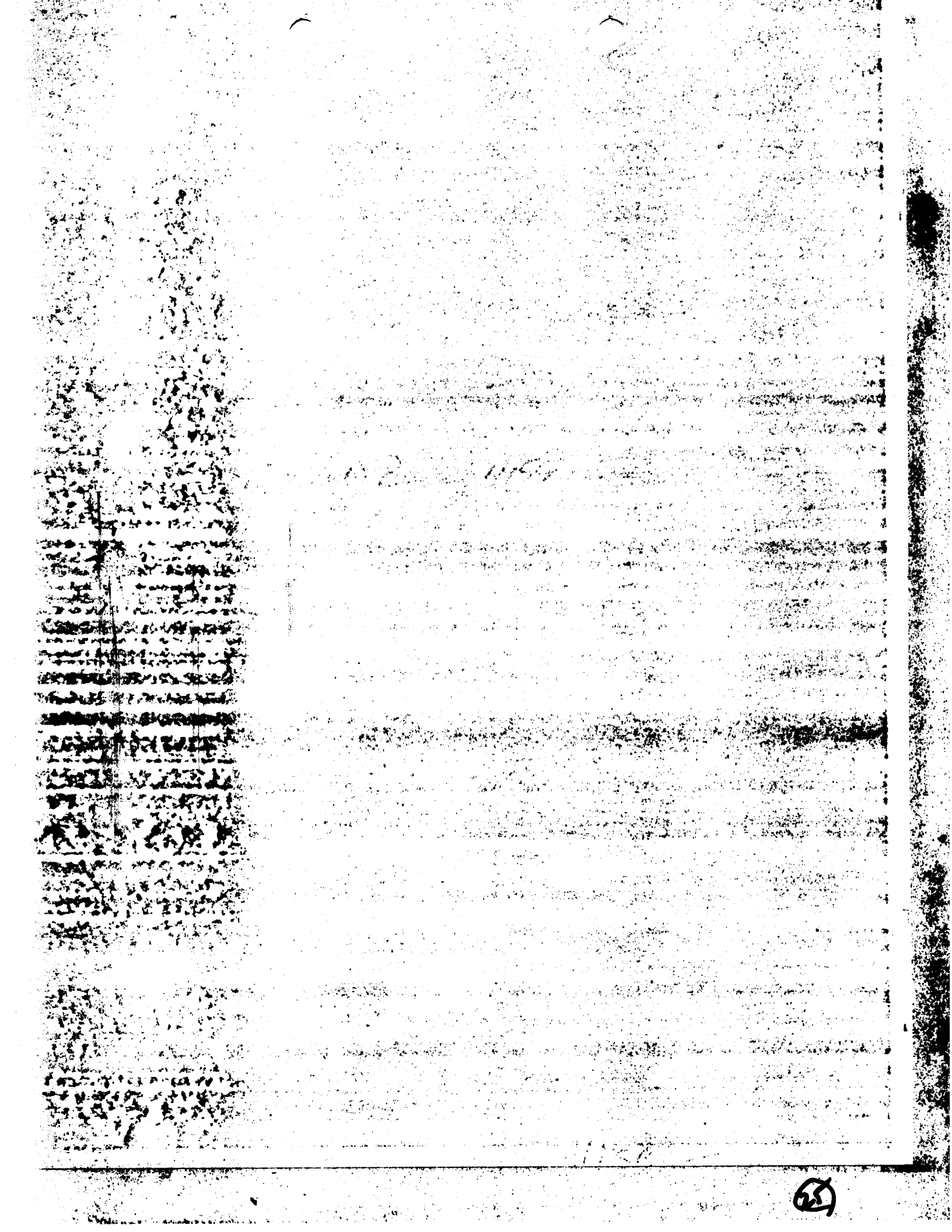
184

27

23

40

17

161

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